

What is claimed is:

1. A damper of a drum type washing machine comprising:

a cylinder;

5 a piston rod inserted to be movable linearly in the cylinder;

a guide member provided with a coupling hole to which an insertion portion of the rod member is coupled at a center thereof in order to attenuate vibration according to a width size of vibration transferred to a tub by multi-stage, and provided with first and second grooves at an outer circumferential surface thereof;

10 a fixed damping member fitted into the first groove and adhered to an inner surface of the cylinder; and

a movable damping member up and down movably fitted into the second groove and selectively adhered to the inner surface of the cylinder.

15 2. The damper of claim 1, wherein the cylinder is provided with a fixed portion to be fixed to a cabinet of a drum type washing machine at one side thereof and is provided with an accommodation portion at another side thereof, and the piston rod is provided with a fixed portion to be fixed to a tub of the drum type washing machine at one side thereof and is provided with an insertion portion
20 elastically inserted into the accommodation portion at another side thereof.

3. The damper of a drum type washing machine of claim 2, wherein an inclination surface that a middle portion thereof is more concaved than both ends is formed at a bottom surface of the second groove.

25 4. The damper of a drum type washing machine of claim 1, wherein

stoppers adhered to an inner surface of the cylinder are formed at both sides of the first and second grooves.

5. A damper of a drum type washing machine comprising:

5 a cylinder:

a piston rod inserted to be movable linearly in the cylinder;

a damping member mounted at the piston rod and generating a damping force by rubbing against the inner circumferential surface of the cylinder; and

10 a damping force transfer means mounted between the piston rod and the damping member and generating a damping force only when a vibration transferred through the cylinder or the piston rod is greater than a pre-set displacement value.

6. The damper of claim 5, wherein the damping force transfer means

15 comprises:

a first slot formed at the piston rod and having a predetermined length in a longitudinal direction;

a support member disposed slidably at an outer circumferential surface of the piston rod and having a second slot disposed facing the first slot; and

20 a ball inserted to be rolled in the ball chamber formed by the first slot and the second slot.

7. The damper of claim 6, wherein the support member is formed in a

cylindrical shape so as to be slidably inserted into the outer circumferential surface
25 of the piston rod, and has an inner circumferential surface at which one or more

second chambers are formed, and an outer circumferential surface having a mounting groove in a circumferential direction in which a damping member is fixed.

8. The damper of claim 6, wherein an inner circumferential surface of the damping member is fixedly inserted in the mounting groove of the support member and an outer circumferential surface thereof rubs on the inner circumferential surface of the cylinder.

9. The damper of claim 8, wherein the damping member is made of a grease-absorbed sponge material.

10. The damper of claim 5, wherein the damping force transfer means comprises:

a support member slidably disposed at an outer circumferential surface of the piston rod and fixing the damping member; and

stoppers protruded at regular intervals at the outer circumferential surface of the piston rod and restricting vertical movement of the support member so that the support member can be slidably moved within a pre-set range.

11. The damper of claim 5, wherein the damping force transfer means comprises:

a support member slidably disposed at the outer circumferential surface of the piston rod, and having a chamber therein and a damping member fixed at its outer circumferential surface; and

a stopping protrusion protruded from the outer circumferential surface of

the piston rod and movably positioned at the chamber of the support member.

12. The damper of claim 11, wherein the support member comprises:

engaging jaws formed at its upper and lower ends, to which the stopping

5 protrusion is engaged by slidably contacting with the outer circumferential surface of the piston rod, and

a chamber formed therein into which the stopping protrusion is inserted to be movable in a vertical direction.